

1. A memory array with byte-alterable capability comprising:

a select gate metal oxide semiconductor field effect transistor,

5 MOSFET device, and

102 a split-gate memory cell device whose source is connected to the drain of said select gate MOSFET device.

2. The memory array with byte-alterable capability of claim 1 further comprising:

10 bit lines which are tied to the drains of said split-gate memory
102 cell.

3. The memory array with byte-alterable capability of claim 1 further comprising:

15 source lines which are tied to the sources of said select gate
102 MOSFET devices.

4. The memory array with byte-alterable capability of claim 1 further comprising:

20 word lines which are tied to control gates of said split-gate memory
102 cell.

5. The memory array with byte-alterable capability of claim 1 further comprising:

25 select lines which are tied to select gates of said select
102 gate MOSFET devices.

6. The memory array with byte-alterable capability of claim 1 wherein said

102 control gate MOSFET contains a floating gate which is insulated from said control gate by a dielectric insulating material such as silicon dioxide.

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FIG 4 7. The memory array with byte-alterable capability of claim 6 wherein said

102 split-gate memory cell contains a source region which is also the drain for said select gate MOSFET device.

10 8. The memory array with byte-alterable capability of claim 6 wherein said

102 control gate MOSFET contains a drain region.

9. The memory array with byte-alterable capability of claim 6 wherein said

102 control gate MOSFET contains a control gate which is insulated from said

15 floating gate by a dielectric insulating material such as silicon dioxide.

10. The memory array with byte-alterable capability of claim 6 wherein said

102 control gate contained in the control gate MOSFET device is insulated from said drain of said control gate MOSFET device by a dielectric insulating material.

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11. The memory array with byte-alterable capability of claim 1 wherein said

102 select gate MOSFET contains a select gate which is insulated from said select gate drain region and said select gate source region by a dielectric insulating material.

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12. The memory array with byte-alterable capability of claim 1 wherein said bits of said bytes have a common source line.

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5 13. The memory array with byte-alterable capability of claim 1 wherein said source lines common to said bytes have a high voltage applied to inhibit erase of said cells of said unselected bytes.

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10 14. The memory array with byte-alterable capability of claim 1 wherein said source lines common to said bytes have a low voltage applied to enable an erase of said cells of said unselected bytes.

15. The memory array with byte-alterable capability of claim 1 wherein the erasure of selected bytes requires a high voltage on said select gates.

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16. The memory array with byte-alterable capability of claim 1 wherein the erasure of selected bytes requires a high voltage on said control gates.

20 17. The memory array with byte-alterable capability of claim 1 wherein the programming of selected cells of said selected bytes require high voltage on said select gate, a lower voltage on said control gate and a high voltage on said source line.

18. The memory array with byte-alterable capability of claim 1 wherein said word lines common to said bytes have a zero voltage applied to inhibit programming of unselected cells.

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19. A method of producing a memory array with byte-alterable capability comprising the steps of:

10 including a select gate metal oxide semiconductor field effect transistor, MOSFET device, and,

 including a split-gate memory cell whose source is connected to the drain of said select gate MOSFET device.

15 20. The method of producing a memory array with byte-alterable capability of claim 19 further comprising the step of:

 including bit lines which are tied to the drains of said control gate

20 MOSFET devices.

21. The method of producing a memory array with byte-alterable capability of claim 19 further comprising the step of:

25 including source lines which are tied to the sources of said select gate MOSFET devices.

22. The method of producing a memory array with byte-alterable capability of
claim 19 further comprising the step of:

5 including word lines which are tied to control gates of said control
gate MOSFET devices.

23. The method of producing a memory array with byte-alterable capability of
10 claim 19 further comprising the step of:

 select lines which are tied to select gates of said select
gate MOSFET devices.

15 24. The method of producing a memory array with byte-alterable capability of
claim 19 wherein said control gate MOSFET contains a floating gate which is
insulated from said control gate by a dielectric insulating material such as silicon
dioxide.

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25. The method of producing a memory array with byte-alterable capability of
claim 24 wherein said control gate MOSFET contains a source region which is
also the drain for said select gate MOSFET device.

25 26. The method of producing a memory array with byte-alterable capability of
claim 24 wherein said control gate MOSFET contains a drain region.

27. The method of producing a memory array with byte-alterable capability of
claim 24 wherein said control gate MOSFET contains a control gate which is
insulated from said floating gate by a dielectric insulating material such as silicon
dioxide.

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28. The method of producing a memory array with byte-alterable capability of
claim 24 wherein said control gate contained in the control gate MOSFET device
is insulated from said drain of said control gate MOSFET device by a dielectric
insulating material.

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29. The method of producing a memory array with byte-alterable capability of
claim 19 wherein said select gate MOSFET contains a select gate which is
insulated from said select gate drain region and said select gate source region by
a dielectric insulating material.

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30. The method of producing a memory array with byte-alterable capability of
claim 19 wherein said bits of said bytes have a common source line.

20 31. The method of producing a memory array with byte-alterable capability of
claim 19 wherein said source lines common to said bytes have a high voltage
applied to inhibit erase of said cells of said unselected bytes.

32. The method of producing a memory array with byte-alterable capability of
claim 19 wherein said source lines common to said bytes have a low voltage
applied to enable an erase of said cells of said unselected bytes.
- 5 33. The method of producing a memory array with byte-alterable capability of
claim 19 wherein the erasure of selected bytes requires a high voltage on said
select gates.
- 10 34. The method of producing a memory array with byte-alterable capability of
claim 19 wherein the erasure of selected bytes requires a high voltage on said
control gates.
- 15 35. The method of producing a memory array with byte-alterable capability of
claim 19 wherein the programming of selected cells of said selected bytes
require high voltage on said select gate, a lower voltage on said control gate and
a high voltage on said source line.
- 20 36. The method of producing a memory array with byte-alterable capability of
claim 19 wherein said word lines common to said bytes have a zero voltage
applied to inhibit programming of unselected cells.